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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,734

Applicant(s)

LYNN ET AL.

Examiner

Jeffrey R. Swearingen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,11-14,16,17,19-21 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11-14,16,17,19-21 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. The limited specification that Applicant has provided does not give sufficient detail to support the amendments to the claims as submitted on March 28, 2005. Paragraph 0024 of the disclosure is the limit of what Applicant has used to describe the speed change subject matter. No statement in this paragraph gives support for the new amendment of *selecting an enclosure services module on the first channel, the enclosure service module being a last enclosure services module*. No support is given for *selecting any enclosure services module*.

4. Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. Applicant has not given sufficient information in paragraph 0024 of the disclosure to allow one of ordinary skill in the art to implement the invention. Applicant has not explained what is meant by *waiting for an enclosure to come up*. Applicant has not explained how to wait for an enclosure to come up on a second channel. Applicant has not explained the difference between an *enclosure service module* and an *enclosure*. Applicant has not explained how to select an enclosure services module. Applicant has not explained how to check whether the selected enclosure service module is the first enclosure service

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module on the first channel. Applicant has further not provided any support for the repetitive steps presented in claim 25 as newly presented on March 28, 2005.

6. Claim 9 is not enabled because one of ordinary skill in the art would be unable to understand which direction the speed change frames are being sent. Applicant claims *the bridge controller sends a speed change frame to each of the plurality of enclosure service modules on the first channel in sequence from the last enclosure services module to the first enclosure services module*. Applicant has previously stated in claim 9 that the system comprises in part *a plurality of enclosure services modules, each on the first channel connected in sequence from a first enclosure services module and successively connected to successive enclosure services modules to a last enclosure services module and each on the second channel connected in reverse sequence from the last enclosure services module and successively connected to the successive enclosure services modules to the first enclosure services module*. There is also no physical relationship present in claim 9 to connect the bridge controller to the enclosure services modules.

7. Claim 25 is further not enabled because there is no explanation on how to repeat the steps (which have not been explained) or what the end condition of this claim entails (e.g. until the first enclosure service module on the first channel is selected and receives the speed change frame).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 1 is highly difficult to comprehend to one of ordinary skill in the art. One of ordinary skill would find the phrasing of *selecting an enclosure services module on the first channel, the enclosure service module being a last enclosure services module* to be indefinite since the first half of this phrase indicates that more than one enclosure service module has the chance of being selected and the second

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half indicates that only one module – the last module – can be selected. Part d of this claim is also indefinite, as one of ordinary skill in the art would not be able to definitely know what is meant by *when the enclosure comes up on the second channel, checking whether the selected enclosure service module is the first enclosure service module on the first channel* as the wording brings into question whether one item can actually be more than one item (e.g. can a *selected enclosure module* be both a *first enclosure service module* and a *last enclosure service module*) at the same time.

11. Claim 25 is highly difficult to comprehend to one of ordinary skill in the art. One of ordinary skill in the art would have difficulty knowing definitely what applicant means by “next successive to the selected enclosure services module”. One of ordinary skill would have difficulty understand what Applicant means by a module that is next successive to a module and have (sic) not received the change speed frame.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

13. Claims 1, 9, 10-12, 14, 16-17, 19-21 are rejected under 35 U.S.C. 102(a) as being anticipated by Fibre Channel Framing and Signaling working draft proposal, Rev. 1.30, published July 9, 2001, hereafter referred to as FC-FS Draft Standard.

14. Regarding claim 1, the FC-FS Draft Standard discloses a multi-ported system with two links that allow for speed negotiation between ports on a channel. The Speed Negotiation algorithm asks for a speed change and then alters the speed of the channel based upon that request. [See FC-FS Draft Standard, pages 532-533.] The diagram shown only presents two ports, but since the Speed Negotiation algorithm works in the Fibre Channel system, which commonly utilizes multiple ports in a daisy chain or loop, the diagram could be inherently extended to cover all ports in the chain. A bridge controller is taught on pages 20-21 of the FC-FS Draft Standard. By this rationale claim 1 is rejected.

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15. Regarding claim 9, the limitations of this claim are substantially the same as the limitations of claim 1. Therefore the rationale for rejecting claim 1 is applicable for rejecting claim 9. By this rationale claim 9 is rejected.

16. Regarding claim 11, the FC-FS Draft Standard is applied as in claim 10. The FC-FS Draft Standard further discloses that Fibre Channel is bi-directional in nature. [See FC-FS Draft Standard, page 17, section 4.1.] By this rationale claim 11 is rejected.

17. Regarding claim 12, the FC-FS Draft Standard is applied as in claim 10. The FC-FS Draft Standard deals with fibre channel devices being connected. [...*specifies a variety of media, and associated drivers and receivers capable of operating at various speeds.* See FC-FS Draft Standard, page 17, section 4.1.] By this rationale claim 12 is rejected.

18. Regarding claim 14, the FC-FS Draft Standard is applied as in claim 10. Examiner takes Official Notice that a microprocessor can be integrated into a node. Microprocessors were well known in the art at the time of the invention and had been in use in multiple applications in the networking arts for decades preceding the invention. The addition of a microprocessor is commonplace for most networking applications. By this rationale claim 14 is rejected.

19. Regarding claim 16, the limitations of this claim are substantially the same as the limitations of claim 1. Therefore the rationale used to reject claim 1 is also used to reject claim 16. By this rationale claim 16 is rejected.

20. Regarding claim 17, the FC-FS Draft Standard is applied as in claim 16. The FC-FS Draft Standard discloses having a forward and a reverse connection between two nodes. [See FC-FS Draft Standard, page 532, Figure 58.] By this rationale claim 17 is rejected.

21. Regarding claim 19, the FC-FS Draft Standard is applied as in claim 18. The FC-FS Draft Standard further discloses the presence of a controller and nodes [*a bridge controller and enclosure service modules.* See FC-FS Draft Standard, page 21, Figure 3.] By this rationale claim 19 is rejected.

22. Regarding claim 20, the FC-FS Draft Standard is applied as in claim 19. The FC-FS Draft Standard further discloses transmitting information between nodes in a frame format. [See FC-FS Draft Standard, page 36, section 5.1.] The FC-FS Draft Standard deals with fibre channel devices being

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connected. [...*specifies a variety of media, and associated drivers and receivers capable of operating at various speeds.* See FC-FS Draft Standard, page 17, section 4.1.] By this rationale claim 20 is rejected.

23. Regarding claim 21, the FC-FS Draft Standard is applied as in claim 20. The FC-FS Draft Standard further discloses passing a command signal to change a parameter between nodes using a channel. [See FC-FS Draft Standard, pages 532-546.] By this rationale claim 21 is rejected.

24. In regard to claim 25, FC-FS has provided for a repetition of functions on page 17 by defining Fibre Channel as being implemented by using any combination of three listed topology preferences. Because the speed change is defined for one example step as shown in the rejection of claim 1, and

Claim Rejections - 35 USC § 103

25. Claims 4, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the FC-FS Draft Standard.

26. Regarding claim 4, the FC-FS Draft Standard is applied as in claim 3. The FC-FS Draft Standard further states that the Speed Negotiation algorithm is specified for only one port at a time, but fails to explicitly state that each port in a channel must be negotiated individually in order. However, the Speed Negotiation algorithm is applied between links as shown in Figure 58. In Figure 6 [page 24] ports are shown in a loop topology. It would be obvious to one of ordinary skill in the art that in order to negotiate speed on all ports in a channel, one at a time, that they would have to be done in consecutive order after each port has its individual speed negotiated based upon the limits of the Speed Negotiation algorithm as stated in Section 29 of the FC-FS Draft Standard. By this rationale claim 4 is rejected.

27. Regarding claim 6, the FC-FS Draft Standard is applied as in claim 4. The FC-FS Draft Standard deals with fibre channel devices being connected. [...*specifies a variety of media, and associated drivers and receivers capable of operating at various speeds.* See FC-FS Draft Standard, page 17, section 4.1.] By this rationale claim 6 is rejected.

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28. Regarding claim 7, the FC-FS Draft Standard is applied as in claim 4. The FC-FS Draft Standard further discloses transmitting information between nodes in a frame format. [See FC-FS Draft Standard, page 36, section 5.1.] By this rationale claim 7 is rejected.

29. Regarding claim 8, the FC-FS Draft Standard is applied as in claim 4. The FC-FS Draft Standard further discloses switching speed within 1 millisecond from the time the algorithm asks for a speed change. [Examiner considers this to meet the criteria of "on-the-fly." See FC-FS Draft Standard, page 533.] By this rationale claim 8 is rejected.

30. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the FC-FS Draft Proposal and Wall et al. (U.S. Patent No. 6,507,923).

31. Regarding claim 5, the FC-FS Draft Proposal is applied as in claim 4. The FC-FS Draft proposal fails to explicitly disclose use of a third channel in the system.

32. However, Wall discloses a Fibre Channel system that can accommodate up to sixteen separate channels. [See Wall, column 2, lines 60-65.]

33. It would have been obvious to one of ordinary skill in the networking art at the time of the invention to combine the teachings of Wall and the FC-FS Draft Proposal. The addition of extra channels allows for greater troubleshooting abilities in a more complex Fibre Channel system. [See Wall, column 1, line 29 – column 2, line 57.] The FC-FS Draft Proposal gives motivation for the combination by stating that it can allow for improvements, clarifications, and other capabilities, which will improve the performance of Fibre Channel products and fit those products for new applications. [See FC-FS Draft Proposal, page ii, Abstract.] By this rationale claim 5 has been rejected.

34. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over the FC-FS Draft Proposal and Mulvey et al. (U.S. Patent No. 6,629,216).

35. Regarding claim 13, the FC-FS Draft Proposal is applied as in claim 10. The FC-FS Draft Proposal fails to disclose the ability to bypass a disk drive.

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36. However, Mulvey discloses a fibre channel system that has the ability to bypass disk drives. Mulvey discloses a by-pass selector section, which can bypass a disk drive. [See Mulvey, Abstract. See Mulvey, column 2, lines 31-49.]
37. It would have been obvious to one of ordinary skill in the networking art at the time of the invention to combine the teachings of the FC-FS Draft Proposal and Mulvey for the purpose of preventing disruption of the system if one drive goes bad. [See Mulvey, column 1, lines 56 – 67.] The FC-FS Draft Proposal gives motivation for the combination by stating that it can allow for improvements, clarifications, and other capabilities, which will improve the performance of Fibre Channel products and fit those products for new applications. [See FC-FS Draft Proposal, page ii, Abstract.] By this rationale claim 13 has been rejected.

38. In the FC-FS Draft Proposal, a method of changing speed on channels of a port is described. It is not explicitly taught to do this at all ports in the daisy chain. However, one of ordinary skill in the art would find it obvious to repeat this modification for all ports (*enclosure services modules*) in order to eliminate race conditions in the transmitted signals, therefore preventing congestion and packet loss.

Response to Arguments

39. Applicant's arguments, see remarks, filed 8/19/05, with respect to claims 1, 9, 10-12, 14, 16-17, and 19-21 have been fully considered and are persuasive. The 102(b) rejection of the aforementioned claims has been withdrawn. The finality of the last action has been accordingly withdrawn.
40. The FC-FS Draft Standard is used again to reject the aforementioned claims as a 102(a) reference.
41. Applicant argues that FC-FS Draft Standard fails to disclose a "multi-ported system." Applicant is advised to look at page 17, section 4.1, which discloses that Fibre Channel is logically a bi-directional, point-to-point, serial data channel which can be implemented as a point-to-point link between two N_Ports, a set of N_Ports interconnected by a switching network called a Fabric; and a set of N_Ports

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interconnected with a loop topology as defined in FC-AL-2. The presence of two ports is a "multi-port system".

42. The arguments concerning claim 25 are moot since a new rejection has been made using the FC-FS Draft standard.

43. Applicant has not argued any other points in the remarks.

Conclusion

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Examiner is including a full copy of the FC-FS Draft Proposal, revision 1.30, for the convenience of Applicant. The Examiner is also including a full copy of revision 0.50 of the FC-FS Draft Proposal for Applicant, published September 21, 2000.

45. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'J. H. S.', located on the left side of the page.A handwritten signature in black ink, appearing to be 'Rupal Dharia', located above the printed name.

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER